

## **CLAIMS**

What is claimed is:

1. A method of noise attenuation comprising the steps of:  
generating a noise canceling signal from a control unit based on an environmental assumption;  
assessing the environmental assumption of the control unit; and  
altering the noise canceling signal based on the assessment.
2. The method of claim 1 wherein assessing comprises the step of comparing the environmental assumption with actual environmental data.
3. The method of claim 2 further including the step of generating a test sound wave to obtain actual environmental data.
4. The method of claim 3 wherein comparing comprises comparing the test sound wave with a model of the sound wave based on the environmental assumption.
5. The method of claim 4 wherein comparing comprises comparing the speeds of the test sound wave and the model of the sound wave.
6. The method of claim 1 wherein the environmental assumption is assessed more than once.
7. The method of claim 1 wherein assessing occurs for a predetermined period of time.
8. The method of claim 1 further including the step of ceasing the generation of the noise canceling signal based on a system condition.

9. The method of claim 8 wherein the step of ceasing the generation of the noise canceling signal occurs prior to the step of assessing the environmental assumption of the control unit.

10. A method of noise attenuation comprising the steps of:
  - generating a noise canceling signal from a control unit based on an environmental assumption;
  - sensing a system condition;
  - ceasing the generation of the noise canceling signal based on the system condition;
  - assessing the environmental assumption of the control unit; and
  - altering the noise canceling signal based on the assessment.
11. The method of claim 10 wherein assessing comprises the step of comparing the environmental assumption with actual environmental data.
12. The method of claim 11 further including the step of generating a test sound wave to obtain actual environmental data.
13. The method of claim 12 wherein comparing comprises comparing the test sound wave with a model of the sound wave based on the environmental assumption.
14. The method of claim 13 wherein comparing comprises comparing the speeds of the test sound wave and the model of the sound wave.
15. The method of claim 10 wherein the environmental assumption is assessed more than once.
16. The method of claim 10 wherein assessing occurs for a predetermined period of time.

17. An air induction system comprising:
- an air induction body;
  - a speaker in proximity to said air induction body;
  - a microphone in communication with said speaker;
  - a reference sensor; and
  - a control unit with a noise attenuation feature based on an environmental assumption, communicating with said speaker, said microphone, and said reference sensor, wherein said control unit assesses said environmental assumption and alters said noise attenuation feature based on the assessment.
18. The air induction system of claim 17 wherein said control unit assesses said environmental assumption by comparing said environmental assumption with actual environmental data.
19. The air induction system of claim 18 wherein said speaker generates a test sound wave to obtain actual environmental data.
20. The air induction system of claim 19 wherein said test sound wave is received by said microphone and compared by said control unit with a model of a sound wave based on said environmental assumption.